# Ex. 6 - Personal Privacy

**From:** Engelking, Pat (MPCA)
**Sent:** Mon 2/2/2015 8:20:04 PM
**Subject:** advisory committee questions about last week's e-mail
RE: Wild Rice Advisory Committee Update
FW: Wild Rice Advisory Committee Update_JMM input

Good afternoon,

We have received two e-mails (see attached) following our advisory committee update last week about additional approaches to analyzing the wild rice field survey data the MPCA is pursuing in response to peer review recommendations. In particular, these e-mails expressed concern that the structural equation modeling (SEM) recommended by the reviewers is a novel approach with which the MPCA had no familiarity or experience.

Ecologists have used SEM to some extent for decades, and it or similar approaches are established tools in the social sciences. The U.S. Environmental Protection Agency has also

recently listed SEM as a potential tool for deriving evidence of a causal relationship in the context of environmental management *(http://www.epa.gov/caddis/si_concepts.html)*. Several of the MPCA's experienced statisticians and modelers are familiar with the approach and have been working with Dr. Pollman on this effort. Part of the contract with Dr. Pollman is to teach our in-house scientists how to use SEM software, so we can more quickly complete that modeling ourselves and evaluate its usefulness.

One of the issues raised about SEM questioned whether the wild rice study experiments were designed for use of this statistical technique. We want to clarify that MPCA is not using this tool to analyze the hydroponic experiments but instead to better understand relationships among field study data. While SEM is not often used to analyze data produced from structured laboratory experiments, SEM can be a useful tool to analyze observational data obtained from environmental monitoring. Unlike SEM, traditional statistical tools are not designed to model complicated systems of variables that include feedback mechanisms such as the dynamic relationship between porewater iron and porewater sulfide.

One of the e-mails we received also asked if we could provide a copy of the RFP for the wild rice population modeling. We do not yet have a contract in place for this effort, but will not be doing an RFP as this would be a smaller contract.

Finally, we want to reiterate that SEM is just one of multiple lines of evidence and investigation that the MPCA is completing as part of its evaluation of the wild rice study data. However, SEM seems to be an appropriate tool and the peer reviewers had a consensus recommendation that we use SEM to further explore the field survey data. Please be assured that all analysis tools used will be summarized and discussed at the next advisory committee meeting and also documented in the MPCA's technical support document when it is developed.

Pat

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